CLAIMS

1. (Amended) An expandable stent, [including]
an elastic tubular lattice structure having a first end zone [(14)], a second end zone [(16)], a longitudinal direction [(L)] and a radial direction,
the lattice structure defining an outer diameter and an inner lumen and being formed by wall segments, which wall segments branch off at intersections [(20], and
the lattice structure being interrupted at least some of the intersections **[(22)]**, so as to increase the flexibility of the stent, wherein the wall segments [(24)] are expanded <u>in the radial direction</u> at least at the interrupted intersections [in the radial direction] such that, upon curvature of the stent along the longitudinal direction, a reduction of the inner lumen due to the wall segments at the interrupted intersections is prevented.

Cancel Claim 2

3. (Amended) A stent in accordance with [at least one of the preceding claims] <u>claim 1</u>, wherein the expansion of the wall segments is formed by an arcuate curvature of these wall segments along the longitudinal direction.

4. (Amended) A stent in accordance with [at least one of the preceding claims] <u>claim 1 or 2</u>, wherein the wall segments are interrupted in regular distribution over the stent at substantially two thirds of all the intersections.

5. (Amended) A stent in accordance with [at least one of the preceding claims] <u>claim 1</u>, wherein the lattice structure has [in the expanded state of the stent] apertures having an aperture width of maximally 9 mm <u>when the stent is expanded</u>.

6. (Amended) A stent in accordance with [at least one of the preceding claims] claim 1, wherein the wall cents have a width between 0.12 mm and 0.17 mm.

7. (Amended) A stent in accordance with [at least one of the preceding claims] claim 1, wherein the lattice structure has substantially a wall thickness of between 0.2 mm and 0.3 mm.

8. (Amended) A stent in accordance with at least one of [the preceding] claims 1-7, wherein the stent consists of a metallic material.

9. (Amended) A stent in accordance with claim 8, wherein the metallic material consists of a shape memory alloy.

Cancel claims 14-18

19. (Amended) A process in accordance with [at least one of claims 12 to 18] claim 12, wherein interrupting the intersections takes place in the step of slotting.

20. (Amended) A process in accordance with [at least one of claims 12 to 19] claim 12, wherein the steps of slotting are carried out by laser cutting.

21. (Amended) A process in accordance with claim 12, wherein the step of expanding **[includes]** comprises the following partial steps:

placing the stent on a mandrel, the mandrel being designed as a counter-part to the expanded shape of the stent;

heating the stent placed on the mandrel;

cooling the heated stent

removing the stent after cooling from the mandrel.

Cancel claims 23-26.

Add the following new claims:

27. A combination of an expandable stent and a stent delivery system wherein:
the stent comprises an elastic tubular lattice structure having a first end zone, a second end zone, a longitudinal direction and a radial direction, the lattice structure defining an outer diameter and an inner lumen and being formed by wall segments, which wall segments branch off at intersections, and the lattice structure being interrupted at least some of the intersections, so as to increase the flexibility of the stent, wherein the wall segments are expanded in the radial direction at least at the interrupted intersections such that, upon curvature of the stent along the longitudinal direction, a reduction of the inner lumen due to the wall segments at the interrupted intersections is prevented.

28. A combination in accordance with claim 27, wherein the delivery system contains a balloon dilation catheter.

29. A combination in accordance with claim 27, wherein the application system is a system in accordance with the Seldinger technique for catheterization of bodily vessels.

30. A process in accordance with claim 27, wherein the stent consists of a metallic material made from a shape memory alloy having the following alloy moieties:
- nickel: 54.5 to 57 mass percent,
- titanium: 43 to 45.5 mass percent.

31. A production process for a stent, comprising the following steps:

providing a tubular element with an external diameter, and inner lumen, a first end zone and a second end zone;
slotting the tubular element into a lattice structure, the lattice structure being formed by wall segments, which wall segments branch off at intersections;
interrupting at least some of the intersections at selected positions, so as to increase the flexibility of the stent;
expanding the wall segments in the radial direction at least at the interrupted intersections and at least one of said first and second end zones such that, upon curvature of the stent along the longitudinal direction, a reduction of the inner lumen due to the wall segments at the interrupted intersections is prevented.

32. process in accordance with claim 31, wherein the step of expanding includes expanding the wall segments in the radial direction in the first and second end zones.

33. A process in accordance with claim 31, wherein interrupting the intersections takes place in the step of slotting.

34. A process in accordance with claim 31, wherein the steps of slotting are carried out by laser cutting.

35. A process in accordance with claim 31, wherein the step of expanding further comprises:
placing the stent on a mandrel, the mandrel being designed as a counter-part to the expanded shape of the stent;
heating the stent placed on the mandrel;
cooling the heated stent;
removing the stent after cooling from the mandrel.

36. A process in accordance with claim 35, wherein the step of expanding further comprises:
after cooling the heated stent,

placing a mold element externally over the mandrel and the stent, which element corresponds in its contour to the expanded shape of the stent.

37. A process in accordance with claim 31, wherein the stent consists of a metallic material made from a shape memory alloy having the following alloy moieties:
- nickel.: 54.5 to 57 mass percent,
- titanium: 43 to 45.5 mass percent.

NEW

38. A process in accordance with claim 12 wherein the tubular element comprises a metallic material.

39. A process in accordance with claim 38, in which the metallic material is provided with a dislocation threshold temperature, and wherein the step of expanding includes the following partial steps:
placing the stent on a mandrel, the mandrel being designed as a counter-part to the expanded shape of the stent;
heating the stent placed on the mandrel to a temperature above the dislocation threshold temperature;
cooling the heated stent to a temperature below the dislocation threshold temperature;
removing the stent after cooling from the mandrel.

40. A process in accordance with claim 39, further comprising:
after cooling the heated stent, placing a mold element externally over the mandrel and the stent, which element corresponds in its contour to the expanded shape of the stent.

41. A process in accordance with claim 38, wherein the metallic material is made from a shape memory alloy having the following alloy moieties:

- nickel: 54.5 to 57 mass percent,
- titanium 43 to 45.5 mass percent.

42. A process in accordance with claim 38, wherein the process provides in the step of expanding the wall segments or after this step, heat treatment of the stent, so as to achieve a temperature reactive shape memory effect in the zone of the expanded wall segments.

NEW

43. A process in accordance with claim 38, wherein the process further includes between the steps of slotting the tubular element and interrupting the intersections, a step of influencing the structure of the metal lattice of the stent.

44. A process in accordance with claim 38, wherein the process before the step of interrupting the intersections further includes a step of heat treatment, in order to achieve a temperature reactive shape memory effect in the entire stent region.

45. A process in accordance with claim 38, wherein the process further includes a final step of polishing the stent.

REMARKS

The present application is a national stage application under 35 U.S.C. §371. This preliminary amendment is being filed to place the application in proper form under the rules of U.S. patent practice and to address other minor issues of form as set forth below.

The title has been corrected to identify the invention as pertaining to a stent. The title appearing on the published international application: Expanded "Spreader" ... appears to be in error.

The drawings have been corrected to remove German language captions in